

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A method for determining the performance of a mobile terminal within a wireless communications network, the method comprising the steps of:

receiving messages transmitted via the communications network associated with user transactions (110);

receiving messages transmitted via the communications network associated with mobile terminal type information (120);

correlating data within the received user transaction messages with data within the mobile terminal type information messages (130); and

deriving one or more performance indicators by mobile terminal type information from the correlated data (140).

2. (Currently Amended) A method for determining the performance of a mobile terminal within a wireless communications network, the method comprising the steps of:

receiving messages transmitted via the communications network associated with user transactions (110);

receiving messages transmitted via the communications network associated with mobile terminal type information (120);

deriving, from the received user transaction messages, one or more performance indicators for the user transactions (140); and

correlating the performance indicators regarding the user transactions with data within the mobile terminal type information messages (130).

3. (Currently Amended) The method of claim 2 any of the preceding claims, further comprising the steps of:

acquiring messages transmitted via the communications network associated with transactions; and

acquiring messages transmitted via the communications network associated with mobile terminal type information.

4. (Currently Amended) The method of claim 2 any of the preceding claims, wherein the correlating step (130) associates the mobile terminal type information with one or more types of mobile terminal.

5. (Currently Amended) The method of claim 2 any of the preceding claims, wherein the received mobile terminal type information messages (120) include mobility management signalling messages.

6. (Original) The method of claim 5, wherein the mobility management signalling messages include the International Mobile Equipment Identity for the mobile terminal type.

7. (Currently Amended) The method of claim 2 any of the preceding claims, wherein the received user transaction messages (110) include user data.

8. (Currently Amended) The method of claim 2 any of the preceding claims, further comprising the step of reconstructing the user transactions from the data within the received messages (215).

9. (Currently Amended) The method of claim 2 any of the preceding claims, wherein the received user transaction messages (110) include session management signalling messages.

10. (Currently Amended) The method of claim 9, wherein the step of deriving the performance indicators (140) is based on data within the session management signalling messages.

11. (Currently Amended) The method of claim 9 or 10, further comprising the step of reconstructing user sessions from the data within the received user transaction messages (225).

12. (Currently Amended) The method of claim 2 any of the preceding claims, wherein the step of deriving the performance indicators (140) is based on the period of time measured from the transmission of a message and the receipt of an acknowledgment signal for the transmitted message.

13. (Currently Amended) The method of claim 2 any of the preceding claims wherein the step of deriving the performance indicators (140) is based on at least one of messaging downlink/uplink throughput and IP level throughput.

14. (Currently Amended) The method of claim 2 any of the preceding claims wherein the step of deriving the performance indicators (140) is based on the ratio of user aborted messaging transactions.

15. (Currently Amended) The method of claim 2 any of the preceding claims wherein the step of deriving the performance indicators (140) is based on the number of lost packets estimated from messaging retransmissions.

16. (Currently Amended) The method of claim 2 any of the preceding claims, wherein the performance indicators are benchmarked by mobile terminal type.

17. (Currently Amended) The method of claim 2 any of the preceding claims wherein the messages are acquired from an open interface.

18. (Currently Amended) The method of claim 2 ~~any of the preceding claims~~, further comprising the step of constructing a performance database (360) having fields that identify the type of mobile terminal and the type of user transaction (370) and corresponding fields that include calculated or estimated performance indicators (380).

19. (Currently Amended) The method of claim 2 ~~any of the preceding claims~~, further comprising the step of adjusting the frequency of mobile messaging signals required by the communications network to increase the number of messages containing data to identify the mobile terminal type.

20. – 22. (Canceled)

23. (Currently Amended) An apparatus for determining the performance of a mobile terminal within a wireless communications network (510) comprising:
a first message receiving unit (520) for receiving messages transmitted via the communications network associated with user transactions;
a second message receiving unit (540) for receiving messages transmitted via the communications network associated with mobile terminal type information;
a derivation unit (530) for deriving, from the received user transaction messages, one or more performance indicators for the user transactions; and
a correlation unit (550) correlating the performance indicators regarding the user transactions with data within the mobile terminal type information messages.

24. (Currently Amended) An apparatus for determining the performance of a mobile terminal within a wireless communications network (510) comprising:
a first message receiving unit (520) for receiving messages transmitted via the communications network associated with user transactions;
a second message receiving unit (540) for receiving messages transmitted via the communications network associated with mobile terminal type information;
a correlation unit (550) for correlating data within the received user transaction messages with data within the mobile terminal type information messages; and

a derivation unit (530) for deriving one or more performance indicators by mobile terminal type information from the correlated data.

25. (New) The method of claim 1, further comprising the steps of:
acquiring messages transmitted via the communications network associated with transactions; and
acquiring messages transmitted via the communications network associated with mobile terminal type information.

26. (New) The method of claim 1, wherein the correlating step associates the mobile terminal type information with one or more types of mobile terminal.

27. (New) The method of claim 1, wherein the received mobile terminal type information messages include mobility management signalling messages.

28. (New) The method of claim 27, wherein the mobility management signalling messages include the International Mobile Equipment Identity for the mobile terminal type.

29. (New) The method of claim 1, further comprising the steps of:, wherein the received user transaction messages include user data.

30. (New) The method of claim 1, further comprising the step of reconstructing the user transactions from the data within the received messages.

31. (New) The method of claim 1, wherein the received user transaction messages include session management signalling messages.

32 (New) The method of claim 31, wherein the step of deriving the performance indicators (140) is based on data within the session management signalling messages.

33. (New) The method of claim 31, further comprising the step of reconstructing user sessions from the data within the received user transaction messages (225).

34. (New) The method of claim 1, wherein the step of deriving the performance indicators is based on the period of time measured from the transmission of a message and the receipt of an acknowledgment signal for the transmitted message.

35. (New) The method of claim 1 wherein the step of deriving the performance indicators is based on at least one of messaging downlink/uplink throughput and IP level throughput.

36. (New) The method of claim 1 wherein the step of deriving the performance indicators is based on the ratio of user aborted messaging transactions.

37. (New) The method of claim 1 wherein the step of deriving the performance indicators is based on the number of lost packets estimated from messaging retransmissions.

38. (New) The method of claim 1, wherein the performance indicators are benchmarked by mobile terminal type.

39. (New) The method of claim 1, wherein the messages are acquired from an open interface.

40. (New) The method of claim 1, further comprising the step of constructing a performance database having fields that identify the type of mobile terminal and the type of user transaction and corresponding fields that include calculated or estimated performance indicators.

41. (New) The method of claim 1, further comprising the step of adjusting the frequency of mobile messaging signals required by the communications network to increase the number of messages containing data to identify the mobile terminal type.